19.06.2023

**Requirement Analysis for an Online shopping Site**

Requirement engineering and analysis: The broad spectrum of tasks and techniques that lead to an understanding of requirements is called requirements engineering. Requirements engineering, which is a major process in software engineering, provides the appropriate mechanism for understanding what the customer wants, analysing need, assessing feasibility, specifying the solution unambiguously, and so on. It encompasses seven distinct tasks, which are inception, elicitation, elaboration, negotiation, specification, validation, and management.

* Business Requirements: Represent high-level objectives of the organization or customer who requests the system. They describe why the organization is implementing the system.
* User requirements: Describe user goals or tasks that the users must be able to perform with the product.
* Business rules: The rules in the organization that affect the system, which include corporate policies, government regulations, industry standards, accounting practices, and computational algorithms.

Requirement elicitation techniques: Requirements elicitation is generally performed using certain techniques, such as interview, questionnaires, observation, document analysis, studying similar companies/systems, and prototyping

**Techniques of requirement elicitation and applicability:**

1. Interviews: Conducting interviews with stakeholders, including end-users, managers, and subject matter experts, to gather information about their needs, preferences, and expectations.
2. What is the primary goal of the online shopping site?
3. What products are to be sold in the site?
4. What is the expectation of the registration and login process?
5. Requirements of the shipping and delivery requirements
6. Do you have any specific security requirements for user data and payment transactions?
7. Any specific functionalities for the client that they expect to view in the site?
8. Will the site be limited to a specific geographic vicinity, or is it open worldwide?
9. Are there any restrictions on what type of customers can access the portal? (Ex: Children over 16 years and so on…)
10. Expectations of the site performance and scalability?
11. What kinds of payment methods can the website support?
12. What are the various methodologies to communicate with the customers to notify them the status of their order and to resolve any queries on their side?
13. What is the budget and timeline for the development and subsequent launch of the product in the market?
14. Various methodologies and basic criterion to handle product returns and refunds?
15. How to establish the connection between this portal and the delivery agent?
16. Is this site handled and owned by only the client in talks, or is there any third-party intervention so that they could also be given special rights in handling the portal?
17. What are the expectations of security and privacy constraints expected?
18. Any expectations and preferences on what kinds of technology to utilise to build the project? Or is it open to the comfort of the developer, taking into considerations of the benefits?
19. Will there be additional offers, promocodes and discount offered by the client to the users?
20. Will there be a requirement to categorise the customers based on their purchases and importance to the portal like premium, gold customers etc?
21. Are there any legal or regulatory requirements that the site need needs to comply with?
22. Requirements regarding the looks and aesthetics of the site, expected as well.
23. Surveys and Questionnaires: Distributing surveys or questionnaires to collect feedback and requirements from a large number of stakeholders. This method can be useful for gathering a wide range of opinions and perspectives. The end users are also a primary stakeholder. So distributing these to them, and getting to know what they expect from the product, would be highly beneficial.
24. Gender

* Male
* Female
* Others

1. Age Range:

* 16-20
* 21-25
* 26-30
* 31-40
* 41-50
* 51-60
* 61 and above

1. Which are the shopping sites that you frequently use?
2. Do they prefer online shopping that visiting stores physically? If so, what is the reason?
3. How frequently do you shop online?

* Multiple times a week
* 2-3 times a month
* One a month
* Very rarely, I prefer shopping visiting the markets physically

1. What are the primary reasons for choosing online shopping over physical shopping?

* Better prices
* Time-saving
* Avoids crowds
* Convenience
* Wide product choices
* Ability to filter and look for cheaper and quality ones
* Stores in your locality is not up to the mark of your expectations
* The specific products that you are looking up, is not available in the stores

1. What are your biggest blocks in the process of shopping online?
2. What are the products that you regularly shop on an online portal?

* Clothes and apparels
* Shoes
* Cosmetics
* Electronic appliances and gadgets
* House needs
* Furniture
* Accessories
* Stationery
* Veterinary and pet items
* Games and toys
* Sports products
* Hand and power tools
* Any other

1. Satisfaction with the overall online shopping experience so far?

* 1 (Very dissatisfied)
* 2(Dissatisfied)
* 3(Neutral)
* 4(Satisfied)
* 5(Very satisfied)

1. What payment methods do you usually prefer while making online purchases?

* Credit/ debit cards
* UPI Transactions
* Cash on delivery
* Instalments via gift codes

1. What are the various functionalities do you expect from an ideal online shopping site?

* Easy product search and filtering options
* User-friendly interfaces
* Efficient customer support and communication
* Smooth and secured payment process
* Full view of all the reviews and feedbacks from other customers on a product
* Regular availability of promos and discounts

1. Are there are specific features and functionalities that you feel are lacking or frustrating in existing online shopping sites?
2. Are there any blocks you have in your mind, that doesn’t let you venture into online shopping forums?
3. How much do you consider as an ideal response time for a query that you post on a forum?
4. Do you believe in paid subscriptions and memberships that e-commerce websites offer?
5. How likely are you to leave a review or rating for a product you purchased form an online site?

* Very likely
* Likely
* Neutral
* Unlikely
* Very unlikely

1. Would you prefer to receive personalised recommendations and offers via email or SMS from the online shopping site?
2. How to you suggest, the customer communication system should be built to make the experience a more efficient one?

* A one-to one chat-based forum with the executives of the website
* Email response system
* Very responsive call system, with the support team of the site.

1. Do you regularly Wishlist items for future purchases and do you expect to receive notifications regarding the price drop and availability in the product you were looking for?
2. Does personalisation and related recommendations, often attract you to a specific portal?
3. Observations and site visits: Directly observing users and their work environment to understand their tasks, workflows, and challenges. This method provides insights into the context in which the software will be used. This can even mean, viewing and understanding of similar products in the market.

Areas of focus during our observations and site visits from other similar online shopping portals includes:

* How they display products and description
* User interface and navigation
* The layout of the portal
* Ease of navigation between pages
* Efficient ordering of pages
* Visibility and accessibility of features like cart, search bar, accounts etc
* Shopping cart features
* Checkout process
* Payment and security
* Search and filtering functionality
* Customer support system
* Return and cashback functionalities
* Customer communication system
* Loading speed and performance

During these processes, we have to take detailed notes and capture them wisely for building on and reiterating any updates in the plan. We can refine and enhance the requirements wisely by understanding the situation on-site or from other rival products.

1. Brainstorming: Conducting brainstorming sessions to generate a wide range of ideas and requirements. This method encourages creativity and can help uncover innovative solutions.
2. User Registration and Authentication:

* Password strength determination
* Email verification
* Social media integration

1. Product Details and Reviews:

* Features to embed in the search filters
* A well-defined recommendation system
* Sorting options enablement

1. Product details and Reviews:

* Authorised customer reviews and ratings
* Proper product description and specifications
* Good quality pictures for preview
* Advanced try on features for more customer interactions
* Prompts pushing customers to leave a review for the product purchased

1. Shopping Cart and checkout:

* Streamlined ability to add, edit, and remove items from cart
* Easy checkout process
* Multiple payment options

1. Personalisation and Recommendations:

* Advanced techniques to read and process the search and purchase histories
* Regular notifications to indicate availability of a wish listed/ an interested product.

1. Shipping and delivery:

* Multiple shipping options.
* Filtering out dispatch centres based on localities.
* Order tracking and delivery status system
* Integration with authorised shipping agencies for proper tracking.

1. Returns and Refunds:

* Online request and tracking
* Criterion for returns and refunds
* Proper communication channels for catering to the customer’s needs.

1. Customer support and communication:

* Organised automated/ employed chat support
* Contact forms or email support in a frequent manner
* Confirmation and tracking notifications regularly sent.

1. Security and privacy:

* SSL encryption for secure transactions
* Compliance with data protection rules
* Privacy policy and consent management

1. Design and compatibility:

* Responsive layout for seamless user experience on mobile devices
* Mobile app development complying both for iOS and Android platforms

1. Promotions and Discounts:

* Coupon codes managements
* Special offers to different levels of users based on their categorisation
* Festive discounts catering to the current trends and needs

1. Social Sharing and Integration:

* Integration of this platform with various social medias of the users
* Increasing offers, if a basic social media criterion met.

1. Localisation and Internationalization:

* Inculcating the tax specifications of different localities and applying them depending on the user’s locations
* Multi-currency options can be inculcated
* Multi-language support can be provided for a wider user acceptance of the product